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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0101126F: B-1B SQUADRONS							
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	33.063	33.011	16.265	-	16.265	19.589	11.453	0.087	-	Continuing	Continuing
675344: B-1B Modernization	33.063	33.011	16.265	-	16.265	19.589	11.453	0.087	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program provides Research, Development, Test & Engineering (RDT&E) funding for the B-1B modernization program. The modernization program addresses potential aircraft obsolescent issues due to Diminishing Manufacturing Sources (DMS) and provides new and improved capabilities to the B-1B weapon system that require significant hardware and software development and testing. Vertical Situational Display Upgrade (VSDU) development effort is currently addressing reliability and maintainability issues with the primary flight displays, which are quickly becoming unsupportable due to DMS for repair parts. B-1B improvement efforts include, but are not limited to, the development of the Fully Integrated Data Link (FIDL) and Self Contained Standby Attitude Indicator (SCAI). Fully Integrated Data Link (FIDL) will provide Link 16 line of sight (LOS) and Joint Range Extension (JRE) beyond-line-of-sight (BLOS) data link capability and supports machine-to-machine transfer of target data to the B-1. SCAI is the backup to the primary flight instruments and provides indications of attitude, airspeed, mach, altitude and vertical velocity. This development activity will replace the current obsolete legacy SCAI with a more reliable/supportable off-the-shelf display. SCAI must be functional and reliable in the event of primary flight display failure, and is a Mission-Essential Subsystem List (MESL) item required for flight. Upgrades to the B-1B training systems are included in the modernization program to keep the training systems current with the aircraft configuration. In addition, program funds cover engineering/planning studies, related engineering efforts, program management administrative (PMA) costs and initiatives for future weapon system enhancements, including efforts to improve weapon system operational capabilities, safety, supportability, maintainability, reliability, and total ownership cost. Previous development activities such as Central Integrated Test System (CITS) upgrade, Radar Reliability and Maintainability Improvement Program (RMIP), Inertial Navigation System (INS) upgrade, and ALQ-161A Preprocessor Avionics Control Unit (PACU) software re-host/development, have completed development and are now in production. The Active Electronically Scanned Array (AESA) Radar study has been completed. All B-1B development programs support planned requirements for unique identification in their production phases. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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B. Program Change Summary (\$ in Millions)		FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget		33.234	33.011	3.834	-	3.834
Current President's Budget		33.063	33.011	16.265	-	16.265
Total Adjustments		-0.171	-	12.431	-	12.431
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-	-			
• Other Adjustments		-0.171	-	12.431	-	12.431
Change Summary Explanation						
FY 2011 adjustments (Congressional General Reductions -\$0.171, Congressional Directed Reductions \$0.0, Congressional Adds \$0.0, Congressional Directed Transfers \$0.0) are reflected in BY1 Other Adjustment Row.						
FY 2013: Program increased by \$12.4M to support new start development effort in the Self-Contained Standby Attitude Indicator (SCAI) and continue development in simulator training systems.						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2011	FY 2012	FY 2013
Title: B-1B Modernization				33.063	30.611	3.865
Description: Continued B-1B Modernization						
FY 2011 Accomplishments:						
Preprocessor Avionics Control Unit (PACU) software migration concluded in FY11. Radar Reliability and Maintainability Improvement Program (RMIP) concluded flight test, Functional Configuration Audit/Physical Configuration Audit (FCA/PCA) and development effort in FY11. Inertial Navigation System (INS) received Milestone C approval in Oct 2010. INS continued its flight test program, FCA/PCA and development effort. Fully Integrated Data Link (FIDL) completed Phase II of flight test and FCA/PCA. Vertical Situation Display Upgrade (VSDU) entered flight test. Simulator/Trainer development/support continued. General development related support for the flight test effort continued.						
FY 2012 Plans:						

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C. Accomplishments/Planned Programs (\$ in Millions)									FY 2011	FY 2012	FY 2013
Vertical Situation Display Upgrade (VSDU) will continue flight test and address any software or hardware issues that resulted from flight testing. VSDU will also complete FCA and modify test aircraft 0068. Inertial Navigation Systems (INS) and Fully Integrated Data Link (FIDL) will conclude. General development related support for the flight test efforts will continue. FY 2013 Plans: Vertical Situation Display Upgrade (VSDU) will complete flight test. VSDU will also complete the modification to test aircraft 0068. VSDU activities will conclude.											
Title: B-1B Development of Simulators for CITS, FIDL and VSDU Description: B-1B Development of Simulators for CITS, FIDL and VSDU FY 2012 Plans: Simulator and training upgrades will begin the software and hardware development and testing to support fielding of VSDU, Central Integrated Test System (CITS), and Fully Integrated Data Link (FIDL). FY 2013 Plans: Simulator and training upgrades will continue the software and hardware development and testing to support fielding of VSDU, Central Integrated Test System (CITS), and Fully Integrated Data Link (FIDL).									-	2.400	10.400
Title: B-1B Attitude Indicator Description: Development of the Self Contained Standby Attitude Indicator. FY 2013 Plans: Development of a replacement for the B-1 Self Contained Standby Attitude Indicator will begin.									-	-	2.000
Accomplishments/Planned Programs Subtotals									33.063	33.011	16.265
D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APAF PE 0101126F, B-1B Squadrons...: B-1B Squadrons, Mods	207.091	197.706	149.487	0.000	149.487	131.927	90.847	110.629	112.729	Continuing	Continuing
• APAF PE 0809731F, Training Suppo...: Training Support to Units, Mods	0.394	0.301	0.269	0.000	0.269	0.333	0.431	0.442	0.450	Continuing	Continuing

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D. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• APAF PE 0207446F, Bomber Tactica...: <i>Bomber Tactical Data</i> <i>Link, Mods</i>	0.000	0.000	0.000	0.000	0.000	0.221	0.325	0.089	0.000	Continuing	Continuing
• APAF PE 0101126F, B-1B Squad (3)...: <i>B-1B Squadrons, Spares</i>	12.455	12.121	17.988	0.000	17.988	24.424	18.374	13.625	13.640	Continuing	Continuing
• APAF PE 0207446F, Bomber Tac (4)...: <i>Bomber Tactical Data Link,</i> <i>Spares</i>	0.000	0.000	0.000	0.000	0.000	0.916	0.928	0.934	0.000	Continuing	Continuing
• APAF PE 0101126F, B-1B Squad (5)...: <i>B-1B Squadrons, Common</i> <i>Support Equipment</i>	6.236	0.787	6.729	0.000	6.729	3.214	2.020	2.037	2.096	Continuing	Continuing
• APAF PE 0101126F, B-1B Squad (6)...: <i>B-1B Squadrons, Post</i> <i>Production Support</i>	6.990	4.743	0.965	0.000	0.965	3.683	0.000	0.000	0.000	Continuing	Continuing

E. Acquisition Strategy

Key elements of the overall B-1B Modernization acquisition strategy include: use of sole source contract with a prime/integrating contractor (Boeing); installed performance responsibility; use of Cost Plus Incentive Fee (CPIF) development contracts; and combining developmental upgrades with software sustainment blocks to minimize the number of software releases, aircraft downtime and differences in fielded configurations.

F. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force			DATE: February 2012
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
VSDU Development Testing (DT)	1	2012	3	2012
VSDU Milestone C Low Rate Initial Production (LRIP)	2	2012	2	2012
VSDU Full Rate Production (FRP) Decision Review (DR)	2	2013	2	2013
VSDU Full Rate Production (FRP) Contract Award (CA)	2	2013	2	2013
RMIP Estimate of Completion (EOC)	1	2012	1	2012
INS FRP DR	1	2012	1	2012
INS FRP CA	2	2012	2	2012
FIDL FRP DR	2	2013	2	2013
FIDL FRP CA	2	2013	2	2013
Training Systems Upgrades CA	3	2012	3	2012
Training Systems Upgrades CDR	4	2012	4	2012
Training Systems IOC	4	2014	4	2014
PACU Fielding Decision	1	2012	1	2012
SCAI Replacement CA	2	2013	2	2013
SCAI Replacement FRPD	2	2014	2	2014